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1. CUTTING IDLE EQUIPMENT COSTS

Ray M. Hudson, Assistant Director, Commercial Standards.

The casual visitor walking through a factory usually stops and watches the machines that are running. He is interested in what the machine is doing, what it is making, and how.

The factory manager going through his plant spots the idle machines and asks why. The machines in operation do not worry him. When they are working, he knows that his service of supply is feeding the material up to the machine; that his workers are on the job and that his supervisory force is carrying out its orders. Machines at work likewise tell him his maintenance crew is keeping these master tools of industry in shape for service.

An idle machine signifies just one thing, but a most vital one in the profitable operation of a business. That one thing is "break-down". Not always is it possible to get the real cause for the "break-down" from an examination of the machine, or its surroundings.

Broken parts, breaks in the power supply, failure to have material up to the machine, absence of the operator, and similar causes for idleness may be apparent at a glance. But often-times tracing the cause of idle machines to its prime source leads clear back to the sales department, and not infrequently, right up to the general manager's, or president's desk.

Lack of orders often sends salesmen hurring in every direction, "beating the bushes" for what they can scare up. When they arrive, they find others there also beating the same bushes. Back comes the word, "Competition is too keen", - "Our prices are too high", - "We need more lines, newer and better".

Right at that moment is the time for the president, the sales manager and the factory manager to take counsel of each other. "To run or not to run" the machines is the question before them all. Operating them for the sake of increased sales, derived from orders at profitless prices, usually means that idleness charges absorbed or prevented in the shop appear later as red ink on the profit and loss statement. The danger of this situation is that the management does not know definitely, and can not control, the amount of the loss it may ultimately have to take.

Letting the machine stand idle piles up costs that have to be paid for eventually, but at least, the management has control over those costs. It knows the number of idle machines, the value of the idle investment, and can calculate the costs of this inactivity. The duration of the idle period is also up to the management. It can lengthen or shorten that period by its choice of solutions.

Design and development of new lines takes time. Finding new uses for the current product also takes time. Analysis of sales for those lines which produce the bulk of the company's business doesn't take long. Usually 80% of the business comes from 20% of the varieties offered. An executive decision to concentrate all advertising, selling, and manufacturing effort on the "bread and butter" lines in the catalog can be put into effect quickly.

In cases where this decision has been made, concentrated production effort has lowered costs, made lower selling prices possible, and lower price is a strong sales argument. Sales have jumped, production schedules increased, and idle machines have ceased to be a worry. Simplification has started idle wheels turning in many plants.

2. STANDARDIZED MARKING EFFICIENT. Speaking before the Traffic, Receiving and Marking Group convention, held in Detroit, Mr. I. F. Henry, Traffic Manager, Starwbridge & Clothier of Philadelphia, said that standardized marking lowers costs and speeds service. He discussed the practicability of reducing the number of tickets used by the stores. Reports were made on the simplification accomplished in this field by several stores. In order to bring about this needed simplification, Mr. Henry said that it would be necessary to standardize the amount of information that is to be put on a ticket; standardize the kind of ticket used on each kind of merchandise; and standardize the mode of attaching the tickets to the various articles.

3. URGES SIMPLIFIED BUYING ON PART OF HOUSEWIFE. Avoidance of waste in production and distribution of commodities can be aided by the "home purchasing agent", with consequent savings to her pocketbook. Ray M. Hudson, Assistant Director in charge of the Commercial Standards Group of the Bureau of Standards, told the convention of the General Federation of Women's Clubs at San Antonio, Texas, last month. Copies of this speech may be obtained by addressing the Division of Simplified Practice, Department of Commerce, Washington, D. C.

4. **WHOLESALE GROCERS SEEK BETTER DISTRIBUTION.** A Bureau of Economic Research has been organized by the American Wholesale Grocers Association for the purpose of gathering and disseminating facts and information that will enable wholesalers of food products to operate more successfully. It is the belief of the Association that many of the wholesalers' problems can be solved by adopting more economical and scientific methods. The Bureau is working for the simplification of stocks and the elimination of slow moving items in the wholesaler's as well as in the retailer's stocks. A definite program now being evolved includes an educational campaign in modern merchandising to be carried on to the retailers of the country through the wholesale distributors.
5. **SPECIFICATIONS IN PRINT FOR TUBES.** Standard specifications for lap-welded and seamless steel and lap-welded iron boiler tubes, as adopted by the American Society for Testing Materials, have been put in a Spanish-English edition by the Bureau of Foreign and Domestic Commerce, Department of Commerce. The pamphlet, under the heading "Industrial Standards No. 63", may be obtained at 5 cents per copy from the Superintendent of Documents, Government Printing Office, Washington, D. C. The pamphlet contains 18 pages, with the English text on left-hand pages and Spanish on the right-hand.
6. **SAVINGS ON STATIONERY.** In a recent article in *Railway Purchases and Stores* Lester Bernstein, Manager, and Irving S. Compton, investigator, the Commercial Development Department of the Philadelphia Company, discuss "How One Committee on Stationery Functions". In their article the writers state that "as by-products of the committee's work there has been issued from the stores department a stock catalog to all within the company making or approving stationery requisitions and a brochure on reproducing costs of typewritten matter. Of the savings thus far accomplished by the committee, two-thirds have been in paper and printing. Among some of the results thus far secured, the following may be of passing interest: Of the 1,600 forms collected changes in paper or color were made in 500, 72 forms were discontinued, 9 were revised, and 45 combined into 22. Of the forms collected 39 per cent were changed in some way. The number of external or business letterheads were reduced from 161 to 27. A single corner card on envelopes for external correspondence was established for all companies and departments in the central general office building. The number of pen points carried in stock were reduced from 30 to 6. Where it was developed that different departments were separately ordering the same article, such orders have been grouped to permit purchasing in large quantities."
7. **SIMPLIFIED INVOICE PROGRESSES.** Companies and concerns favoring the use of the simplified invoice are making surveys of the extent to which their incoming invoices are rendered on this form.

Recently S. L. Whitestone, Comptroller for the General Electric Company, Schenectady, N. Y., reported to the Division of Simplified Practice that "a special survey covering a period ranging from 1 to 10 days at the various plants of the company showed that approximately 19 per cent of the invoices received by them were on the simplified form". Shortly afterward, Mr. C. M. Finney, Comptroller of the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., reported to the Division that "26 per cent of all invoices received by this company are on the simplified invoice form". "This 26 per cent" said Mr. Finney, "covers only the invoices strictly conforming to the simplified form and does not include any invoices rendered on some modification of the simplified form".

The Division of Simplified Practice is very pleased to get these progress reports from acceptors of the simplified invoice. In fact we would like to feature in this Bulletin each month, a list of the firms using the simplified invoices. It ought to be fairly easy to check up the incoming invoices for each month and forward us the figures, showing the percentage which conforms strictly to the simplified form.

If the readers of the Bulletin will do this for August, we can list the results in our September 15th issue; the September results in our October 15th issue, and so on. Send us your results by the 25th of August and let's see who "leads the League" up to that time.

8. **MARKET OF DISCONTENT.** "The industrial revolution, responsible for mass production and higher standards of living, today has entered a new and complex phase, that of developing a quality market" said Julius H. Barnes, President of the Barnes-Ames Company, in his article "The Market of Discontent", in Nation's Business. Mr. Barnes said that we are learning that human wants are not limited that we can stimulate production by stimulating desires. That we can make people want not merely more things but better things.

He further said that "while mass production with its economies of cost, widens the range of articles sold, an appeal to individual preference can market an article largely outside the influence of price competition. It is significant that today articles on the front page of every daily paper denouncing a fluctuating price level would fail to arouse the slightest public interest, whereas ten years ago the yellow sheets found their readiest subject of public information in the rise of bread from five to six cents a loaf. Our established custom of paying the consumer price without question is making for greater industrial security. Good wages and sustained individual preference have extended the radius of quality buying. If added to this there is developed a foreign quality market, then we shall indeed have built up the soundest of national economy".

9. **TEAMWORK.** Under the head of "Teamwork", Knute Rockne in Nation's Business, stated that business today is popularly caricatured as being on an organizing debauch in which creative individualism is crushed and stifled. He said that no interpretation of organization could be further from the truth. Organization is a fusing of many individualisms into a dynamic, astute group-mindedness, a co-ordinated initiative. Business needs this cooperative teamwork, and the grandstand salesman or the grandstand vice-president can do as much harm to an industry as the grandstand half-back can do to football. Cooperation does not put a premium on mediocrity, but rather, discovers and develops leadership. It is not a sentiment; it is an economic necessity. In this day of rapid, almost revolutionary changes in our economic and commercial processes, it seems almost axiomatic that business must have the broad vision of organization, the courage of group action, and the close interplay of teamwork if it is to meet successfully the challenge of new conditions.

10. **HAND-TO-MOUTH BUYING.** American business is noted for its ready adoption of new machinery and new methods, but no departure from established custom in recent times has so affected every branch of business as this new policy of buying and producing in proportion to consumptive needs, says Warren Beecher in The Magazine of Wall Street in an article "Is Hand-to-Mouth Buying Taking the Gamble Out of Business".

Mr. Beecher says that this is not merely a passing phase, a temporary exigency of present conditions. It is, rather, a definite policy being adopted throughout American business. Today, companies are enjoying a more even volume of business distributed over twelve months. Operations fluctuate less widely, employment is steadier, and unfilled orders, formerly looked upon as an infallible barometer of business, have lost their significance in a better distributed consumer demand and consumer prosperity. But the greatest effect on industry is the elimination of commodity gambling. This means that emphasis is put on actual earnings, arising from increased efficiency or improvement in operation, rather than on profits resulting from raw material speculation.

11. **STANDARD STOCK SALES.** "Today the greatest need in store management and store merchandising is for accurate standards on which to operate the business. Many store managements now have standards, particularly in controlling stock and in expense budgeting, which are working out admirably. Comparing them with methods of ten years ago, they are remarkably scientific", according to the June number of *Store Operation*, which discusses the study conducted by the University of Michigan School of Business Administration on "Standard Stock Sales Ratios for Department Stores". This study was conducted under the supervision of Carl N. Schmalz, Assistant Professor of Retailing. Complete figures from 52 stores were tabulated, examined and analyzed, and the result is a remarkably comprehensive set of figures for estimating the necessary stock to provide for current and near-future sales.
12. **IMPROVEMENT OF FOOD DISTRIBUTION.** Among the newer trade associations is the American Institute of Food Distribution, Inc., offices 67 Wall Street, New York City. This association is to bring together producers, manufacturers and distributors of food "for the purpose of promoting more orderly food markets and better understanding in food distribution. According to a statement issued by the Institute, it will assemble facts regarding the production and distribution of each important food commodity, and issue classified weekly digests showing the progress of markets and trade conditions.
13. **WAGES AND HOURS OF LABOR, 1913-1927.** Bulletin No. 47, "Union Scales of Wages and Hours of Labor" has just been released by, and may be secured free from, the Bureau of Labor Statistics, U. S. Department of Labor. This Bulletin includes reports for 862,308 trade union members employed at time rates in 66 leading cities. Among the trades considered are: bakers, brick layers, carpenters, plasterers, plumbers, stone cutters, granite cutters, chauffeurs, teamsters and drivers, laundry workers, linemen and longshoremen, book and job printers, newspaper printers, bus drivers, and street railway motormen and conductors. Employees in the time work trades had an average full time of 45.2 hours per week. The union trades as a whole experienced an increase of 260 per cent in the time wage rate per hour, and a decrease of 7.6 per cent in the full time hours per week, between 1913 and 1927.
14. **STANDARDS YEARBOOK.** Standardization is described as the "pacer of human progress" in a review of the Bureau of Standards yearbook for 1928 just off the press. The yearbook reviews scientific and industrial advance in the United States, with particular attention to the adaptation of standardization processes to industry. The yearbook points out that standardization makes permanent each scientific advance, assuring us that there will never again be a lost art. At the same time standardization is flexible, each standard shall be reviewed and revised at frequent intervals to keep pace with progress both in science and industry and in the users ideas of what is satisfactory service.

The yearbook is issued by the National Bureau of Standards as a companion volume to Commerce Yearbook. The latter deals strictly with industry and commerce, while the former confines itself to standards and standardization. It contains outlines of the activities and accomplishments of not only the Bureau of Standards and other agencies of the Federal Government and States, counties and municipalities but also the societies and associations of which standardization is a major or very important activity with special emphasis on their accomplishments during the year 1927 and their programs for future work.

15. **ADVOCATES BETTER BUYING OF HOUSEHOLD GOODS.** The work of the Bureau of Standards, with particular reference to simplified practice, commercial standards, and certification and labelling as they relate to the home and the housewife, was discussed by Director of the Bureau, Dr. George K. Burgess, before the convention of the General Federation of women's Clubs in San Antonio, Texas, last month. Dr. Burgess stated that 85 per cent of goods sold at retail are bought by women and every effort is being made to eliminate waste and to see that the purchaser gets her money's worth and what she sets out to buy.

16. **SCRAP INDUSTRY HAS BIG TURNOVER.** The American "Scrap Industry" with an annual turnover of \$1,000,000,000, has taken its place with lines of "Big Business" according to The Thrift Magazine in discussing some facts about waste and its utilization.

One of the most interesting phenomena of modern business life is the efforts that are being made to salvage various types of waste materials, according to the Editors of Thrift, who say that the development of machinery and the steadily increasing complexities of life result in an even greater amount of waste of all kinds. At the same time, inventive genius more and more is discovering methods by which various types of waste may be conserved. New and varied products are constantly appearing on the market which have their origin in some material or combination of materials that were previously wasted.

The magazine estimates that waste which is now salvaged has a turnover of \$1,000,000,000 annually and that approximately 2,500,000 net tons of waste paper of all grades are handled by the dealers of the country.

17. **MECHANIC WINS \$750 WASTE PREVENTION PRIZE.** T. E. Heppenstall, electric shop foreman of the Long-Bell Lumber Company, Longview, Washington, won the first prize of \$750 in the National Lumber Manufacturers' Association's 1927-1928 annual waste prevention contest. Fifty-seven entries were received and ten major prizes were awarded. Mr. Heppenstall won first prize for an electrically operated device for determining and recording moisture content of lumber in the dry kiln. This is a particularly timely invention, in view of the attention now being paid to the subject of the moisture content of lumber.

18. **MILLWORK STANDARDIZATION.** Millwork manufacturers in the United States have organized a national millwork institute. This is the first attempt that has ever been made by the millwork industry to effect a national organization. The leaders of the industry report that there is much that the national association can do for the millwork industry, particularly in the matter of establishing more uniform grades and standardized methods of manufacture.

19. CONSUMERS DON'T CONSUME. According to James E. Boyle, Professor of Rural Economy, Cornell University, "non-consuming consumers, reflecting a maladjustment between production and consumption, are a basic factor in every business depression. The situation revolves around the increasing distance separating producer and consumer, which, economically speaking, means that goods are produced at the wrong place and at the wrong time. The time gap is bridged by credit, and the place gap by transportation, and the burden of both falls on distribution.

"The essence of the situation is mass production versus individual distribution. The general problem of preventing or curing this maladjustment breaks up into a number of specific problems. With the solving of these separate but related factors will come a simplification in production, improvements and economies in buying and selling methods, a nicer adjustment of wage rate to output, a more speedy and accurate adjustment of production to changing consumer demand, and a wiser and better control of credit for both production and consumption purposes."

20. REVISION OF GOVERNMENT SPECIFICATIONS. The Federal Specifications Board has eight U. S. Government Master Specifications under revision. These are: F.S.B. #20, Drier, Paint, Liquid; F.S.B. #301, Sheeting, Brown, Cotton; F.S.B. #422, Towels, Huck (With Woven Name); F.S.B. #497, Bunting, Wool; F.S.B. #254b, Denim, Brown (Shrunk); F.S.B. #255a, Denim, Brown, (Unshrunk); F.S.B. #256b, Denim, Indigo Blue (Shrunk); F.S.B. #257a, Denim, Indigo Blue (Unshrunk). The proposed revisions are now before the members of the Federal Specifications Board for criticism, and comment.

21. URGES GROUP MEETINGS. In a recent communication to members of the Pacific Northwest Iron and Steel Conference, E. C. Pape, Chairman 1929 Conference, in discussing group meetings that have been held in various parts of the country by the industry, said that "probably the greatest benefit that has been realized is the saving in actual dollars and cents by standardization of product; in fact, standardization in industry has been considered so important by the United States Government that they have shown a keen desire to aid in every possible manner so as to bring real economy to those industries that are interested in the standardization of their product". A fundamental idea of what simplification is, or simplified practice as termed by the Department of Commerce, may be obtained by reading a booklet of the Division of Simplified Practice, "Simplified Practice, What It is and What It Offers".

22. COTTONSEED HULLS PRODUCTS. That valuable products can be derived from cottonseed hulls, (about one and a quarter million tons of which are produced yearly as a side product by the American farmer) which have heretofore been of little economic value due to their low digestibility by cattle, has been shown by the Bureau of Standards to be much more valuable than has been previously thought to be the case.

The bran has been shown to yield more than one-fourth of its own weight of furfural, and contains about 40 per cent of a sugar known as xylose from which this aldehyde is derived. Xylose sells for about \$100 a pound but can be made from cottonseed hulls for a few cents a pound. In turn this rare sugar can be made into several acids which have likewise been very expensive and practically laboratory curiosities. Furthermore, cottonseed hulls contain more than 50 per cent of crude cellulose half of which is the more valuable alpha cellulose which is the basis of rayon, lacquers and nitrocellulose explosives.

Readers of this Bulletin interested in more information on this subject should address Mr. W. E. Emley, Chief, Organic and Fibrous Materials Division, The Bureau of Standards, Washington, D. C.

23. SURVEY OF CANDY DISTRIBUTION COMPLETED. "Candy Distribution in the United States", a printed report on the national survey of confectionery distribution completed by the Confectionery Section, Bureau of Foreign and Domestic Commerce, Department of Commerce, in cooperation with the National Confectioners Association, has just been released by the Department. The survey considers the consumer appeal of various types of candy, candy's share in the consumer's dollar, sales of various types of candy, types of manufacturers, growth of the candy chain store systems, domination of sales by large concerns, sales by states, trend of per capita consumption, sales opportunities, distribution channels, manufacturers' resale goods, exports of candy, transportation and packing practices, radius of sales, raw materials, reasons for changes in sales volume, cost of distribution, retail outlets in representative cities, etc. The study is based on a questionnaire answered by 1185 manufacturers, whose products represent 83 per cent of the estimated total of candy sold in the United States. The confectioners have deemed this survey of such practical value that they have formally requested its continuation for two years. Copies of "Candy Distribution in the United States" may be obtained for 10 cents per copy from the Superintendent of Public Documents, Government Printing Office, Washington, D. C., or from any district office of the Department of Commerce.

24. SAFETY AND PRODUCTION. A new book on "Safety and Production", which is a report by the American Engineering Council on an engineering and statistical study of the relationship between industrial safety and production, has just been announced by Harper and Brothers, publishers. The book deals with the safety problem in the various industries, speaking on "Accidents in terms of production" as well as "Increased productivity and reduction of accidents".

25. ENDORSES WOOD UTILIZATION COMMITTEE. Colonel D. H. Sawyer, Secretary of the Associated General Contractors of America, recently endorsed the activities of the National Committee on Wood Utilization of the Department of Commerce, as of great importance in the construction field. He stressed the idea of sponsoring grade-marking of lumber to indicate its quality, and emphasized also the value in his opinion of the publication now being prepared by the Committee on the proper use of wood in building and construction.

26. SIMPLIFICATION OF CONTAINERS. In a recent address before the National Association of Retail Grocers, Henry Lohmann, Secretary of the United Retail Grocers Association of Brooklyn, called attention to the need of simplification of the consumer container.

"The consumer is unnecessarily paying out hundreds of millions of dollars each year in the United States in non-standard size food containers, created in many instances by manufacturers, for competition with the standard size containers, special sales, or to bequile the innocent housewife with the idea she is getting a full weight bottle or tin because the appearance is just the same" he said, adding that it should be the duty of the manufacturer, the wholesaler and the retailer to educate the consuming public when buying food products, to consider what they pay for the product itself. That fancy shaped containers, made up in special sizes, or that when the non-standard sizes are manufactured, will require special molds, labels, corks and shipping containers, and that all of this special work entails considerable expense and costs. Simplification of the consumer containers, will curtail

the number of sizes carried by the retailer, which naturally will reduce inventories, and regulate the selling, to standard sizes, and the consumer will then buy according to quality and price.

27. HOME EQUIPMENT STANDARDS. The processes of efficiency engineering will probably never be applied to the home in the same manner as in trade and industry, for the nature of the vocation of home-making is a composite one, where the human product, and not material measurable in dollars and cents, is the ultimate test of efficiency, according to the Federal Board for Vocational Education. Nevertheless, the Board says, the efficiency of plant and equipment in the home is an important factor, and that standardization is needed for household equipment.

It is of more than passing interest, in connection with the statement of the Federal Board for Vocational Education, that the General Federation of Women's Clubs has issued a series of "Home Equipment Primer" in five parts, which deals with the standardization of equipment for the home.

28. FILMS ON CARE OF MOTORS. Two motion picture films, one on carbon monoxide, and the other on the construction, operation, and care of an internal combustion engine, are being produced under the supervision of the Bureau of Mines, of the U. S. Department of Commerce, in cooperation with an automobile manufacturing company. The film on carbon monoxide will be produced in two reels, while that on combustion engines will be produced in three reels.

The object of the carbon monoxide motion picture films is to teach a much needed object lesson regarding the dangers of this deadly gas from automobile exhausts where machines are operated in closed garages. Not only is the danger of this gas portrayed regarding the automobile, but also its presence in the home and how its dangers may be curtailed by simple ventilation and by using proper equipment. It is reported that more than 1,000 human beings were killed by carbon monoxide during last year, and that 700 deaths were due to drivers of automobiles being overcome while their engines were idling in closed garages.

29. TEST OF RAILROAD BEARINGS. No one of the selected laboratory tests, consisting of wear, tension, impact and pounding, can by itself be expected to yield information which is adequate for general comparisons of the various railroad bearing bronzes now in use. This is revealed by a study made by the Bureau of Standards. According to Mr. H. J. French, who was in charge of the work, the bronzes fall into certain general classes, as regards their wearing and mechanical properties, and each group shows superiority for certain types of service.

This work was undertaken by the Bureau in an effort to secure data which would be necessary if any attempt were made to simplify these specifications, and also because it appeared highly desirable to study the properties of the various railroad bearing bronzes now in use. The study covered wear and mechanical properties at various temperatures. There are almost as many specifications for railroad bearing bronzes as there are railroads. So far as can be judged from laboratory tests, existing specifications can be simplified, Mr. French states.

30. BALLOON TIRE SIMPLIFICATION. The 18 sizes of balloon tires, proposed as standard sizes for this type of tire, have been approved by the Board of Directors of the National Automobile Chamber of Commerce and recommended for use by the members.

These proposed 18 standard sizes, reduced from 42 existing sizes, and the proposed method of marking, are the result of a series of meetings held separately and jointly by the Society of Automotive Engineers Special Advisory Committee, the Tire and Rim Division of the Tire and Rim Association, and the Rubber Association of America, with representatives of the National Automobile Chamber of Commerce. The proposed method of marking was put into effect by some of the tire companies on May 15th last.

31. **TOOL STANDARDIZATION.** An extended program for standardization of machine-tools was adopted at a meeting of the Sectional Committee on Small Tools and Machine-Tool Elements recently held in Pittsburgh. This committee was organized several years ago under the procedure of the American Engineering Standards Committee, and is sponsored jointly by the A.E.S.C., the American Society of Mechanical Engineers, and the National Machine-Tool Builders' Association. The first standard formulated by the Committee that related to machine-tool construction was that for T-Slots, bolts, nuts, tongues and cutters, which was issued last year.

32. **STANDARDS FOR ADVERTISING COPY.** A feature of the convention of the Associated Business Papers, Inc., at Shawnee-on-Deleware, Pa., was a proposal for the establishment of standards governing competitive advertising copy in industrial and trade publications, which has been the source of considerable friction. In his annual report, Mr. F. M. Feiker, Managing Director, explained the situation and presented several recommendations.

33. **ELECTRIC CAR STANDARDIZATION.** For many years attempts have been made to standardize electric railway cars, but little appreciable progress has been made until recently. according to Mr. R. S. Torgerson, Editor of Electric Traction. He says that every master mechanic, under the plea of special requirements, wanted to express his individual ideas in the car's design. As a result of this policy, the cost of rolling stock has been unduly excessive and replacements have been restricted.

The industry and car manufacturers have awakened to the folly of pursuing this course and have established a few standards to fit all operating conditions. No attempt has been made to standardize seats, lights and other accessories. Only general dimensions, weights, and windows and door spacing are included in the standard specifications.

34. **EQUIPMENT REPLACEMENT POLICIES.** Until the groundwork is laid for a real science of replacement, the best course for the business executive is to work out his own policy, adhering as closely as possible to the principles employed by concerns that have demonstrated leadership, according to Mr. John H. Van Deventer, Consulting Editor of the McGraw-Hill Publishing Company. Mr. Van Deventer gives the following five principles that will be found to apply:

(1) Recognition of the profitableness of power replacement, and the assumption of a positive, receptive attitude toward improved machinery; (2) Constant check on the degree of utilization of existing equipment to determine whether or not it is giving all it can; (3) Continued study of alternative machinery on the market, and comparison of its performance with that now installed to determine whether obsolescence exists; (4) Prompt replacement where actual obsolescence is indicated, regardless of length of service of equipment in question; (5) Labor and sales policies that permit the worker and the public to share in the benefits secured through the improved machine.

35. ACTIVITIES OF COMMERCIAL STANDARDS GROUP.

DIVISION OF SIMPLIFIED PRACTICE

SHOVELS, SPADES, AND SCOOPS - Simplified Practice Recommendation No. 48, Shovels, Spades, and Scoops, will soon be submitted to the Standing Committee for revision or reaffirmation. The Division of Simplified Practice has been requested by the chairman of the committee to initiate a survey among the acceptors to obtain certain information for the consideration of the committee. In addition to other facts this survey will determine the average degree of adherence that has been accorded the recommendation during the past year.

WROUGHT IRON AND STEEL PIPE - Simplified Practice Recommendation No. 57, Wrought Iron and Wrought Steel Pipe, has been reaffirmed without change, by the industry, for the year beginning June 1, 1928. The Standing Committee reported that the average degree of adherence to this project, based on a factual survey, was 95 per cent. The combined efforts of this general conference resulted in a reduction from a total of 62 sizes to 49 sizes of pipe, corresponding to an elimination of 20.96 per cent and an elimination of 762 sizes of valves and fittings, or a 3.8 per cent reduction in the current variety.

COMPOSITION BOOKS - A sufficient number of written acceptances having been received by the Division of Simplified Practice, from producers, distributors, and users of composition books, the Division announces that Simplified Practice Recommendation No. 84, Composition Books, will be in effect as of September 1, 1928. This recommendation reduced the varieties of this commodity from 86 to 41.

HARD FIBER FLY AND YARN GOODS - A general conference of manufacturers, distributors and users of hard fiber ply and yarn goods (twines) on June 14, 1928, approved a proposed simplified practice recommendation for this commodity. The final simplified practice recommendation, as developed by the industry, covers a reduction from 1304 varieties to 391, or approximately 70 per cent, in the present kinds and put ups of Manila (laid); Java (laid) and Java (twisted); New Zealand (laid) and New Zealand (twisted); and Sisal (twisted). The program applies only to hard fibers. The industry will now be circularized for signed acceptance of the project.

PHOTOGRAPHIC EQUIPMENT - A preliminary conference of manufacturers was held in New York on June 18th to consider the application of the principles of simplified practice to photographic equipment. A committee was appointed to study the opportunity for simplification of threads for lens mounts, shutters and barrels.

PYROXYLIN COATED FABRICS - A general conference of all interests was held in New York last month to consider the simplification of Pyroxylin Coated Fabrics. The program presented by the simplified practice committee of manufacturers was approved, subject to final action at a meeting to be held later in the year, and after a more detailed examination of the proposed schedule by consumer groups. All interested elements of the industry will be circularized for acceptance when the schedule has been finally approved.

SHIPPING TAGS - A preliminary conference of manufacturers of shipping tags was held in Washington on June 25th. to considered a report compiled from a survey of variety in the industry. Discussion of the report disclosed the fact that further study by a committee would be necessary to arrive at the final recommendation to be

considered at a general conference of all interests. The committee was appointed and instructed to consider nomenclature to clear up description of stock, including thicknesses, size of tags, and color of stock.

CANS - More than 750 replies have been received to the questionnaire on can sizes which was recently circularized by the Division of Simplified Practice among the entire canning trade. This survey is being conducted in cooperation with the National Canners Association in an effort to ascertain the diversity of sizes existing today in this type of consumer container.

OLIVES - A survey is being made of the ripe olive industry to determine the necessity for the existing variety in size grades. From the replies received to date it seems that there exists a real need for simplification of these grades. The Division of Simplified Practice is cooperating with the California Olive Association in this project.

POCKET KNIVES - There will be a general conference of all organized manufacturers, distributors and users of pocket knives to be held under the auspices of the Division of Simplified Practice, the latter part of July or the first of August, to consider for formal approval, a simplified list of this type of knives.

ICE CAKE SIZES - A general conference of manufacturers, distributors and users of ice for household refrigerators was held at the Department of Commerce on June 13th. Recommendations for five standard weights of ice cakes, with limiting dimensions for each weight, had been formulated by the simplified practice committee of the refrigeration industries, and was unanimously adopted. This action represents an elimination of approximately 65 per cent of weights previously made and sold.

FIRE ENGINES - At the convention of the Fire Equipment Institute held at Hot Springs, Va., May 28 and 29, recommendations were drafted for reducing the number of fire engine pumping capacities from 14 capacities to 5. A general conference of manufacturers, distributors and users was held at the Department of Commerce on June 27th at which time these recommendations were unanimously adopted.

SIMPLIFIED METHODS OF HANDLING GOODS - A conference of users of material handling equipment, including shippers, carriers and warehousemen, was held at the Department of Commerce on June 6, under the joint auspices of the Bureau of Foreign and Domestic Commerce and the Bureau of Standards. The general subject of physical distribution of goods was fully discussed, also specific methods of handling goods with various types of equipment.

Facts were brought out showing that while equipment for handling bulk goods, and for handling goods during process of manufacture, had been intensively studied and highly developed, the field of miscellaneous commodity freight handling was comparatively undeveloped. The question of handling goods on skids for shipment by rail and water was fully discussed, and the necessity for interchangeability of equipment strongly emphasized.

Representatives of various interests furnished detailed information as to results already obtained in saving time and money by the use of proper handling equipment. Resolutions were passed authorizing the appointment of a general committee of seven, representing all users' interests, to cooperate with the Department of Commerce in carrying on the necessary work of simplification, standardization, and

collection and distribution of facts, statistics and other data. Sub-committees were authorized in each of the following fields: (1) Skids and lift trucks; (2) Tractors and trailers; (3) Steamship pier handling; (4) Motor trucks and cartage in general; (5) Cranes, hoists, trolleys and auxiliary equipment.

The sub-committee on skids and lift trucks was immediately appointed and the Division of Simplified Practice requested to organize a preliminary conference of manufacturers, as soon as possible, for the purpose of proposing definite recommendations as to dimensions of this equipment.

SKID PLATFORMS AND LIFT TRUCKS - A general conference of manufacturers and users of skid platforms and lift trucks, hand and power, held June 28th at the Department of Commerce, approved a proposed simplified practice recommendation concerning skid platforms and lift trucks. The standard heights, 8 inches and 12 inches, were adopted for the under clearance of skid platforms; and it was proposed that "the minimum clearance between runners or supports of skids be not less than 29 inches".

This recommendation, subject to acceptance by all interests, will become effective October 1, 1928. A complete summary of the June 28th conference will be made available for distribution during the month of July.

DENTAL HYPODERMIC NEEDLES - A meeting was held June 27 in Niagara Falls, Ontario, of manufacturers and distributors to consider the simplification of dental hypodermic needles. It was the unanimous opinion of those present that the tentative survey showed the need for simplification and reduction in variety of needles. The Chairman of the Instrument Section of the Manufacturers' Division of the American Dental Trade Association, was requested to draft a tentative list to be used as the basis for establishing a simplified line of needles. Final action on the program will be taken at a general conference of all interests which will be organized under the auspices of the Division of Simplified Practice.

FLOOR SWEEPS - The simplified practice recommendation for floor sweeps which was developed at the general conference of manufacturers, distributors and users, on March 21 and 22, 1928, is now before the industry for acceptance. The adoption of the recommended sizes, viz., 12", 14", 16", 18", 24" and 30" as regular stock items will reduce the variety (length of blocks) from 11 to 6, an elimination of 45 per cent. The new schedule becomes effective January 1, 1929.

GLASS CONTAINERS FOR JELLY AND PRESERVES - A general conference to discuss the simplification of jelly glass and preserve jar sizes and capacities will be held at the Department of Commerce the middle of July, in conjunction with the midyear convention of the National Preservers Association. The exact date had not been agreed upon when this Bulletin went to press.

HOSPITAL PLUMBING FIXTURES - At a preliminary conference of representatives of the hospital plumbing fixture manufacturers, held at the Department of Commerce on June 15th, a suggested or recommended list of types and sizes was worked out for enameled fixtures for hospital use. These recommended types will be combined with the tentative recommendations of the vitreous china and porcelain manufacturers for the review of the Standardization Committee of the American Hospital Association. It is planned to hold a general conference of all interests in the early fall to develop a simplified practice recommendation which will be satisfactory to all concerned.

GLASS CONTAINERS FOR DRUG AND PHARMACEUTICAL TRADE - For some time past it has been the opinion of some of the leaders in the drug and pharmaceutical industries that much might be accomplished through a simplification program for the reduction of the great variety of types and sizes of bottles used in the drug trade. A preliminary conference of some of the representatives of the various drug, pharmaceutical and proprietary associations and representatives of the glass container association, will meet at the Department of Commerce on July 6th to discuss a proposed survey to ascertain the need for simplification.

AMERICAN MARINE STANDARDS COMMITTEE

Manuscripts for printing were released during the month for the following publications:

- AMSC 35 - Insulation of piping and machinery on ships - General Specifications
" 36 - Magnesia molded pipe covering and blocks - Specification
" 37 - Magnesia asbestos plaster - Specification
" 38 - Asbestos millboard - Specification
" 39 - Hair felt for insulation - Specification
" 40 - Cotton duck for insulation coverings - Specification
" 41 - Metallic packing for condenser tubes - Specification
" 42 - SHIP PROPELLER DETAILS
 Hubs for built-up propellers, with flush facings
 Fairwater caps for flush faced propeller hubs
" 43 - Rubber air hose - Specification
" 44 - Rubber steam hose - Specification
" 45 - 1-1/2" water hose, rubber covered - Specification
" 46 - 2-1/2" water suction hose, smooth bore - Specification
" 47 - Oil suction and discharge hose, rubber covered - Specification

Nine proposed amendments to the Constitution of the AMSC were submitted to the membership for ballot vote. The purpose of the amendments is to make the Constitution and plan of organization conform to what has been found practicable in conducting the activities to date.

A revised rough draft of proposed standard specifications for rat proofing of ships has been prepared and is under consideration with the cooperation of the Public Health Service.

Proposed standard specifications for built-up and standard propellers; also for templates for propeller blade flanges and bolting have been revised and submitted to the membership for ballot vote.

COMMERCIAL STANDARDS UNIT

BILLET STEEL - Announcement has been made by the Bureau of Standards of the withdrawal of the pamphlet entitled "Commercial Standard No. 1. New Billet Steel Concrete Reinforcement Bars". While this project is backed by the Concrete Reinforcing Steel Institute, as well as many architects and highway engineers, the procedure of the Bureau requires written acceptances representing 65 per cent of production by volume, and ample support from distributors and consumers. At this time there is not a sufficient number of producers listed as acceptors of the project.

However, in the event the demand for intermediate grade continues to grow and producers are disposed to lend their formal approval, the Bureau of Standards will cooperate and support the program upon request by the issuance of a pamphlet. Under the present circumstances, it is not considered advisable to support this program under the sponsorship of certain branches of the industry to the possible embarrassment of another.

CLINICAL THERMOMETERS - The Bureau of Standards announced under date of June 12, receipt of sufficient number of acceptances to insure the general adoption of Commercial Standard for Clinical Thermometers. This recommendation will be printed in pamphlet form under the title, "Clinical Thermometers, Commercial Standard R91-28". It may be considered as effective October 1, 1928.

PLUG AND RING GAGES - At a preliminary conference of producers and distributors of plug and ring gages held at Rochester, N. Y., on June 21, recommendations for all types of blanks for plain and threaded plug and ring gages from the smallest sizes up to 1-1/2 inches, were given approval. This work is sponsored by the American Gage Design Committee which reaffirmed its previous recommendation that the standards be published as a Commercial Standard by the Bureau of Standards. There are still some questions to be settled relative to locking devices for 1-1/2 to 4-1/2 inch plugs and it is expected that the final general conference will be held some time in September, 1928, in Washington, D. C.

PORCELAIN PLUMBING FIXTURES - A general conference of producers, consumers, master plumbers, etc., held at Washington, D. C., June 12, adopted a Commercial Standard covering nomenclature, grading rules, dimensional standards, and a simplified line for porcelain plumbing fixtures. Copies of this standard are in course of preparation and will be circulated to all interested parties for written acceptance in the near future. This Commercial Standard embodies standard roughing-in dimensions which will permit the architect to proceed with the design, and the plumber to proceed with the installation of the roughing work without previous decision as to make of ware to be used. Standard roughing dimensions will also remove most of the difficulties now surrounding replacement of porcelain plumbing fixtures for buildings which are remodeled or repaired.

PIPE NIPPLES - A general conference of manufacturers of pipe, and pipe nipples, distributors and users was held June 29 at the Department of Commerce. This conference approved Commercial Standards for Steel and Genuine Wrought Iron Pipe Nipples. The conference decided that the effective date for new production and clearance of existing stocks should be January 1, 1929.

